

Remarks/Arguments:

Amendments

Claim 1 has been amended to correct a typographical error. Claims 1 and 9 have been amended to more particularly point out and distinctly claim the subject matter that applicants regard as the invention by indicating which of the recitations of said element selected from the group consisting of tin, silicon, and zinc is indicated. If necessary, support for this amendment is found in original claim 1 and the Abstract. Claims 17-20 have been amended to recite more particularly point out and distinctly claims the subject matter that applicants regard as the invention by specifying that the electrode is a polymer gel electrode and that the polymer is the polymer in the polymer gel electrode.

New claim 23 recites that the central portion consists essentially silicon. Support for this amendment is found on page 15, lines 1-6. Support for newly presented claim 24 is found in Table 1. Support for new claims 25-29 is found in original claims 3-7, respectively, and on page 15, line 23, to page 17, line 8. Support for new claim 30 is found in original claim 3.

It is submitted that no new matter is introduced by these amendments and new claims.

Telephone Interview

Applicants express their appreciation to Examiner Susy Tsang-Foster for the courtesy extended to applicants' representative Bruce Monroe during a telephone interview on January 7, 2004. During this interview, Examiner Tsang-Foster indicated that:

- (1) Claims 10 and 12, previously withdrawn, had been brought back into consideration.
- (2) Paragraph 17 of the official action should have said that claims 1-3 and 10-14 (rather than claims 1-3 and 11-14) were rejected.

Claim 16

Claim 16 was withdrawn from consideration as drawn to an unelected species. The withdrawal of claim 16 from consideration is respectfully traversed.

Claim 16 depends both directly and indirectly on claim 14. Claim 14 recites that the solid solution or inter-metallic compound comprises an additional element selected from the group consisting of group 2 elements, transition elements, group 12 elements, group 13 elements, and group 14 elements exclusive of carbon and silicon. Claim 16 recites that the additional element is selected from the group consisting of Mg, Co, Ni, Zn, Al, and Sn.

The Markush group recited in claim 16 is a proper subset of the Markush group recited in claim 14. No new species are introduced. It is submitted that withdrawal of claim 16 from consideration as drawn to an unelected species should be withdrawn.

Rejection under 35 USC 102

Claim 14 was rejected under 35 USC 102(a) as anticipated by the machine translation of Japanese laid open patent publication JP 10-092424 ("JP '424"). This rejection is respectfully traversed.

JP '424 discloses a lithium secondary battery in which the negative active material is aluminum powder on which a conductive inorganic coating has been formed. JP '424, Title and Abstract. The aluminum may be an aluminum ally that includes, among other elements, silicon, zinc, or tin. JP '424. Paragraph 7. The inorganic enveloping layer may be an alloy of various metals, including tin (Sn), zinc (Zn), and lead (Pb), among others. JP '424, paragraph 3.

Claim 14 recites that the central portion comprises silicon (Si) and that the solid solution or inter-metallic compound comprises silicon and at least one additional element from the group defined in the claim. JP '424 does not disclose that the conductive inorganic coating comprises silicon.

Anticipation requires that each and every limitation of the claim be disclosed, either expressly or under principles of inherency, in a single prior art reference. *In re Robertson*, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). Absence from the reference of any claimed

limitation negates anticipation. *Rowe v. Dror*, 42 USPQ2d 1550, 1553 (Fed. Cir. 1997). The rejection of claim 14 as anticipated by JP '424 should be withdrawn because JP '424 does not disclose that the conductive inorganic coating comprises silicon.

First Rejection under 35 USC 103

Claims 15 and 17 were rejected under 35 USC 103(a) as unpatentable over JP '424 in view of EP 730316 A1. This rejection is respectfully traversed.

The Office has not made the *prima facie* case. As discussed above, JP '424 does not disclose that the conductive inorganic coating comprises silicon. Therefore, combination of the references in the manner indicated by the Office does not produce applicants' invention. The rejection of claims 15 and 17 as unpatentable over JP '424 in view of EP 730316 A1 should be withdrawn.

Second Rejection under 35 USC 103

Claims 19 and 20 were rejected under 35 USC 103(a) as unpatentable over JP '424 in view of EP 730316 A1 and further in view of Gies, U.S. Patent 5,665,265 ("Gies"). This rejection is respectfully traversed.

The Office has not made the *prima facie* case. As discussed above, JP '424 does not disclose that the conductive inorganic coating comprises silicon. Therefore, combination of the references in the manner indicated by the Office does not produce applicants' invention. The rejection of claims 19 and 20 as unpatentable over JP '424 in view of Gies should be withdrawn.

Third Rejection under 35 USC 103

Claim 18 was rejected under 35 USC 103(a) as unpatentable over JP '424 in view of EP 730316 A1 and further in view of St. Aubyn Hubbard, U.S. Patent 5,460,903 ("St. Aubyn Hubbard"). This rejection is respectfully traversed.

The Office has not made the *prima facie* case. As discussed above, JP '424 does not disclose that the conductive inorganic coating comprises silicon. Therefore, combination of the references in the manner indicated by the Office does not produce applicants' invention.

The rejection of claim 18 as unpatentable over JP '424 in view of St. Aubyn Hubbard should be withdrawn.

Fourth Rejection under 35 USC 103

Claim 14 was rejected under 35 USC 103(a) as unpatentable over JP '424 in view of EP 730316 A1 and further in view of Iwamoto, U.S. Patent 5,589,296 ("Iwamoto"). This rejection is respectfully traversed.

The Office has not made the *prima facie* case. As discussed above, JP '424 does not disclose that the conductive inorganic coating comprises silicon. Therefore, combination of the references in the manner indicated by the Office does not produce applicants' invention. The rejection of claim 14 as unpatentable over JP '424 in view of Iwamoto should be withdrawn.

New Claims 23-30

New claims 23-29 each recite that the central portion consists essentially of silicon. For the reasons discussed above, it is submitted that these claims are patentable over JP '424 and over the combination of JP '424 with EP 730316 A1, with Gies, with St. Aubyn Hubbard, or with Iwamoto, as indicated by the Office.

New claim 30 depends on claims 14 and 15. It is submitted that this claim is allowable as a claim dependent on allowable claims.

Double Patenting Rejections

Claims 1, 3, 11, 13, and 14 were rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over claim 18 of U.S. Patent 6,090,505, in view of Kawakami, U.S. Patent 5,24,434 ("Kawakami").

Claims 1, 2, 4, 15, and 17 were rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over claim 18 of U.S. Patent 6,090,505, in view of EP 7303216 A1.

Claims 6, 7, 19, and 20 were rejected under the judicially created doctrine of

obviousness type double patenting as being unpatentable over claim 18 of U.S. Patent 6,090,505, in view of Kawakami, and further in view of Gies.

Claims 5 and 18 were rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over claim 18 of U.S. Patent 6,090,505, in view of Kawakami, and further in view of St. Aubyn Hubbard.

Claims 8, 9, 14, 21, and 22 were rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over claim 18 of U.S. Patent 6,090,505, in view of Iwamoto.

Claims 1, 3, and 10-14 were rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over claims 1, 26, 27, 29, 32, 33, and 34 of U.S. Patent No. 6,605,386 B1, in view of Kawakami.

Claims 8, 9, 14, 21, and 22 were rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over claims 1, 26, 27, 29, 32, 33, and 34 of U.S. Patent No. 6,605,386 B1, in view of Iwamoto.

A Terminal Disclaimer accompanies this response. It is submitted that these grounds for rejection have been overcome.

Conclusion

It is respectfully submitted that the claims are in condition for immediate allowance and a notice to this effect is earnestly solicited. The Examiner is invited to phone applicants' attorney if it is believed that a telephonic or personal interview would expedite prosecution of the application.

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Respectfully submitted,

Lawrence E. Ashery, Reg. No. 34,515
Bruce M. Monroe, Reg. No. 33,602
Attorneys for Applicants

BMM/mjc/kc/ds

Enclosure: Terminal Disclaimer

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RatnerPrestia
P.O. Box 980
Valley Forge, PA 19482-0980
(610) 407-0700

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